Amendment to the Claims

Kindly amend claims 1, 3, 5, 28. 35 and 42, as set forth below. In compliance with the Revised Amendment Format published in the Official Gazette on February 25, 2003, a complete listing of claims is provided herein. The changes in the amended claims are shown by strikethrough (for deleted matter) and underlining (for added matter).

1.   (Currently Amended) A method of managing processing groups of a distributed computing environment, said method comprising:

comparing at least a portion of an individual prospective member state of a prospective member of a processing group with at least a portion of a group state of the processing group, said individual prospective member state comprising state defined for the individual prospective member and excluding state defined for the processing group;

updating said at least a portion of the individual prospective member state, should said comparing indicate a difference; and

joining said prospective member to said processing group, in response to said updating.

2.   (Original) The method of claim 1, further comprising:

quiescing activity to said group state; and

retrieving said group state after quiescing activity, for use in said comparing.

3.   (Currently Amended) A system of managing processing groups of a distributed computing environment, said system comprising:

means for comparing at least a portion of an individual prospective member state of a prospective member of a processing group with at least a portion of a group state of the processing group, said individual prospective member state comprising state defined for the individual prospective member and excluding state defined for the processing group;

POU920000003US1   - 2 -

PAGE 5/20 * RCVD AT 5/17/2004 11:36:47 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/4 * DNIS:8729306 * CSID:518 452 5579 * DURATION (mm-ss):05-10

means for updating said at least a portion of the individual prospective member state, should said comparing indicate a difference; and

means for joining said prospective member to said processing group, in response to said updating.

4.   (Original) The system of claim 3, further comprising:

means for quiescing activity to said group state; and

means for retrieving said group state after quiescing activity, for use in said comparing.

5.   (Currently Amended) At least one program storage device readable by a machine, tangibly embodying at least one program of instructions executable by the machine to perform a method of managing processing groups of a distributed computing environment, said method comprising:

comparing at least a portion of an individual prospective member state of a prospective member of a processing group with at least a portion of a group state of the processing group, said individual prospective member state comprising state defined for the individual prospective member and excluding state defined for the processing group;

updating said at least a portion of the individual prospective member state, should said comparing indicate a difference; and

joining said prospective member to said processing group, in response to said updating.

6.   (Original) The at least one program storage device of claim 5, further comprising:

quiescing activity to said group state; and

retrieving said group state after quiescing activity, for use in said comparing.

7.   (Previously Presented) The method of claim 1, wherein the individual prospective member state comprises a sequence number of the prospective member, and wherein the comparing comprises comparing the sequence number of the prospective member with a sequence number of the processing group.

8.   (Previously Presented) The method of claim 7, wherein the sequence number of the prospective member is less than the sequence number of the processing group, and wherein the updating comprises updating the sequence number of the prospective member with the sequence number of the processing group.

9.   (Previously Presented) The method of claim 8, further comprising determining an activity status of the processing group prior to the updating, wherein updating the sequence number of the prospective member comprises updating if the processing group is active.

10.   (Previously Presented) The method of claim 1, further comprising updating at least a portion of the state of the processing group after the joining.

11.   (Previously Presented) The method of claim 10, wherein the updating at least a portion of the state of the processing group after the joining comprises updating the sequence number of the processing group.

12.   (Previously Presented) The system of claim 3, wherein the individual prospective member state comprises a sequence number of the prospective member, and wherein the means for comparing comprises means for comparing the sequence number of the prospective member with a sequence number of the processing group.

13.   (Previously Presented) The system of claim 12, wherein the sequence number of the prospective member is less than the sequence number of the processing group, and wherein the means for updating comprises means for updating the sequence number of the prospective member with the sequence number of the processing group.

14.   (Previously Presented) The system of claim 13, further comprising means for determining an activity status of the processing group prior to the updating, wherein the means

for updating the sequence number of the prospective member comprises means for updating the sequence number of the prospective member if the processing group is active.

15.   (Previously Presented) The system of claim 3, further comprising means for updating at least a portion of the state of the processing group after the joining.

16.   (Previously Presented) The system of claim 15, wherein the means for updating at least a portion of the state of the processing group after the joining comprises means for updating the sequence number of the processing group.

17.   (Previously Presented) The at least one program storage device of claim 5, wherein the individual prospective member state comprises a sequence number of the prospective member, and wherein the comparing comprises comparing the sequence number of the prospective member with a sequence number of the processing group.

18.   (Previously Presented) The at least one program storage device of claim 17, wherein the sequence number of the prospective member is less than the sequence number of the processing group, and wherein the updating comprises updating the sequence number of the prospective member with the sequence number of the processing group.

19.   (Previously Presented) The at least one program storage device of claim 18, further comprising determining an activity status of the processing group prior to the updating, wherein updating the sequence number of the prospective member comprises updating if the processing group is active.

20.   (Previously Presented) The at least one program storage device of claim 5, further comprising updating at least a portion of the state of the processing group after the joining.

21.   (Previously Presented) The at least one program storage device of claim 20, wherein the updating at least a portion of the state of the processing group after the joining comprises updating the sequence number of the processing group.

22.   (Previously Presented) A method of managing processing groups of a distributed computing environment, the method comprising:

POU920000003US1   - 5 -

detecting a failure of at least one member of a processing group;

quiescing activity to a group state of the processing group; and

updating at least a portion of the group state in order to exclude the at least one member of the processing group, wherein the updating comprises updating a sequence number of the group state, said sequence number identifying a version of the processing group.

23.   (Previously Presented) The method of claim 22, wherein the quiescing and updating are performed if the processing group is active and the at least one member of the processing group comprises less than a majority of the processing group.

24.   (Previously Presented) A system of managing processing groups of a distributed computing environment, the system comprising:

means for detecting a failure of at least one member of a processing group;

means for quiescing activity to a group state of the processing group; and

means for updating at least a portion of the group state in order to exclude the at least one member of the processing group, wherein the means for updating comprises means for updating a sequence number of the group state, said sequence number identifying a version of the processing group.

25.   (Previously Presented) The system of claim 24, wherein the means for quiescing and means for updating are performed if the processing group is active and the at least one member of the processing group comprises less than a majority of the processing group.

26.   (Previously Presented) At least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method of managing processing groups of a distributed computing environment, the method comprising:

detecting a failure of at least one member of a processing group;

POU920000003US1   - 6 -

PAGE 9/20 * RCVD AT 5/17/2004 11:36:47 AM [Eastern Daylight Time] * SVR:USPTO-EFXRF-1/4 * DNIS:8729306 * CSID:518 452 5579 * DURATION (mm-ss):05-10

quiescing activity to a group state of the processing group; and

updating at least a portion of the group state in order to exclude the at least one member of the processing group, wherein the updating comprises updating a sequence number of the group state, said sequence number identifying a version of the processing group.

27.   (Previously Presented) The at least one program storage device of claim 26, wherein the quiescing and updating are performed if the processing group is active and the at least one member of the processing group comprises less than a majority of the processing group.

28.   (Currently Amended) A method of managing processing groups of a distributed computing environment, the method comprising:

joining a prospective member to an inactive processing group;

comparing at least a portion of an individual prospective member state with at least a portion of a group state of the processing group, said individual prospective member state comprising state defined for the individual prospective member and ~~excluding state defined for the processing group~~; and

updating the at least a portion of the group state.

29.   (Previously Presented) The method of claim 28, wherein the individual prospective member state comprises a sequence number of the prospective member, and wherein the comparing comprises comparing the sequence number of the prospective member with a sequence number of the group state.

30.   (Previously Presented) The method of claim 29, wherein the updating comprises updating the sequence number of the group state with the sequence number of the prospective member if the sequence number of the prospective member is smaller than the sequence number of the group state.

31.   (Previously Presented) The method of claim 29, wherein the updating comprises updating the sequence number of the group state with a highest sequence number of the members of the processing group if a quorum of the processing group exists.

32.   (Previously Presented) The method of claim 28, further comprising activating the processing group.

33.   (Previously Presented) The method of claim 32, wherein the activating comprises updating a local copy of the group state for any member of the processing group whose sequence number is less than a current sequence number of the processing group.

34.   (Previously Presented) The method of claim 33, wherein the activating further comprises changing the group state to active if a majority of the members of the processing group have a sequence number matching the current sequence number and none of the members has aborted.

35.   (Currently Amended) A system of managing processing groups of a distributed computing environment, the system comprising:

    means for joining a prospective member to an inactive processing group;

    means for comparing at least a portion of an individual prospective member state with at least a portion of a group state of the processing group, said individual prospective member state comprising state defined for the individual prospective member and excluding state defined for the processing group; and

    means for updating the at least a portion of the group state.

36.   (Previously Presented) The system of claim 35, wherein the individual prospective member state comprises a sequence number of the prospective member, and wherein the means for comparing comprises means for comparing the sequence number of the prospective member with a sequence number of the group state.

37.   (Previously Presented) The system of claim 36, wherein the means for updating comprises means for updating the sequence number of the group state with the sequence number

of the prospective member if the sequence number of the prospective member is smaller than the sequence number of the group state.

38.   (Previously Presented) The system of claim 36, wherein the means for updating comprises means for updating the sequence number of the group state with a highest sequence number of the members of the processing group if a quorum of the processing group exists.

39.   (Previously Presented) The system of claim 35, further comprising means for activating the processing group.

40.   (Previously Presented) The system of claim 39, wherein the means for activating comprises means for updating a local copy of the group state for any member of the processing group whose sequence number is less than a current sequence number of the processing group.

41.   (Previously Presented) The system of claim 40, wherein the means for activating further comprises means for changing the group state to active if a majority of the members of the processing group have a sequence number matching the current sequence number and none of the members has aborted.

42.   (Currently Amended) At least one program storage device readable by a machine tangibly embodying at least one program of instructions executable by the machine to perform a method of managing processing groups of a distributed computing environment, the method comprising:

        joining a prospective member to an inactive processing group;

        comparing at least a portion of an individual prospective member state with at least a portion of a group state of the processing group, said individual prospective member state comprising state defined for the individual prospective member ~~and excluding state defined for the processing group~~; and

        updating the at least a portion of the group state.

43.   (Previously Presented) The at least one program storage device of claim 42, wherein the individual prospective member state comprises a sequence number of the

prospective member, and wherein the comparing comprises comparing the sequence number of the prospective member with a sequence number of the group state.

44.   (Previously Presented) The at least one program storage device of claim 43, wherein the updating comprises updating the sequence number of the group state with the sequence number of the prospective member if the sequence number of the prospective member is smaller than the sequence number of the group state.

45.   (Previously Presented) The at least one program storage device of claim 43, wherein the updating comprises updating the sequence number of the group state with a highest sequence number of the members of the processing group if a quorum of the processing group exists.

46.   (Previously Presented) The at least one program storage device of claim 42, further comprising activating the processing group.

47.   (Previously Presented) The at least one program storage device of claim 46, wherein the activating comprises updating a local copy of the group state for any member of the processing group whose sequence number is less than a current sequence number of the processing group.

48.   (Previously Presented) The at least one program storage device of claim 47, wherein the activating further comprises changing the group state to active if a majority of the members of the processing group have a sequence number matching the current sequence number and none of the members has aborted.

49.   (Previously Presented) The method of claim 7, wherein the sequence number of the prospective member identifies a version of a proposed processing group to join.